

PAT-NO: JP409250087A

DOCUMENT-IDENTIFIER: JP 09250087 A

TITLE: SIZING AGENT FOR CARBON FIBER STRAND, SIZE-
TREATED CARBON FIBER STRAND AND PREPREG REINFORCED BY
THE CARBON FIBER AS REINFORCING FIBER

PUBN-DATE: September 22, 1997

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APPL-NO: JP08082115

APPL-DATE: March 11, 1996

INT-CL (IPC): D06M015/55, C08J005/06 , C08J005/24 , D06M015/564

ABSTRACT:

PROBLEM TO BE SOLVED: To obtain a sizing agent for carbon fiber strands capable of satisfying fiber opening and fretting resistant properties, excellent in resin impregnation of a prepreg and satisfying complex material characteristics, size-treated carbon fiber and a prepreg reinforced by the size-treated carbon fiber as a reinforcing fiber.

SOLUTION: This sizing agent for carbon fiber strands essentially contains the following components and the sum total of the components A and B is

≥50wt.% and ≤85wt.%; the component (A): 20-50wt.% of a bisphenol A type epoxy resin which is a liquid at ordinary temperatures the component (B): 20-50wt.% of a bisphenol A type epoxy resin which is a solid at ordinary temperatures, the component (C): 10-30wt.% of a water-soluble polyurethane resin having 90-160°C film flowing temperature and the component (D): 5-20wt.% stearic acid ester. A prepreg is produced by using the carbon fiber strands which are size-treated with the sizing agent as a reinforcing fiber.

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